

		ACTION	DATE
TO	1. SENIOR ENGINEER, CONTROLLER APPLICATIONS		
	2. STEVE BELZ, PROGRAM DELIVERY		
FROM	NATHAN CORCORAN	DATE	24/06/20
SITE	MITCHELL ST/MILLER ST/PYKE ST/CARPENTER ST	SITE NO.	6274
REGION	NORTHERN	MUNICIPALITY	GREATER BENDIGO

## GENERAL

Works Program Job?	No	Project Number	45721AJ1
Classification	MINOR	Works Order Number	4A006929

## EXISTING CONTROLLER DETAILS

Type	Eclipse	Software Version & Release	V5 R20	Lanterns	QH
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## CONTROLLER APPLICATIONS

Target Date for Draft Opsheet	30/06/2020
Target Date for completion of Program	14/07/2020

Prepare Interlocking	
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Update Graphics, Site Notes	No
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Description of changes	LED Upgrade
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## PERSONALITY CHECKSUMS

	Hex	Octal
Total	6B	153
Times	8B	213
Pers	E0	340

Dispatched	20/07/20
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<input checked="" type="checkbox"/>	Site ID Revision updated to	B
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## PROGRAM DELIVERY - SIGNAL INSTALLATION

<input checked="" type="checkbox"/>	Changes to signal hardware	<input type="checkbox"/>	Changes to interlocking
<input type="checkbox"/>	Additional detectors	<input type="checkbox"/>	Changes to existing detector numbering
<input type="checkbox"/>	Upgrade controller software to		
<input type="checkbox"/>	Other changes		
<input checked="" type="checkbox"/>	Place new operation specification in controller		

## PRIOR NOTICE

A job must be entered into RAI Action database before this PROM change will be allowed.

<input checked="" type="checkbox"/>	SCATS data changes - notify	NATHAN CORCORAN	Ext	1210
	OR	DARREN VAUGHAN	Ext	1210

before 3:00pm on the day before switch on.

## SCATS Data Changes - Checksum Update

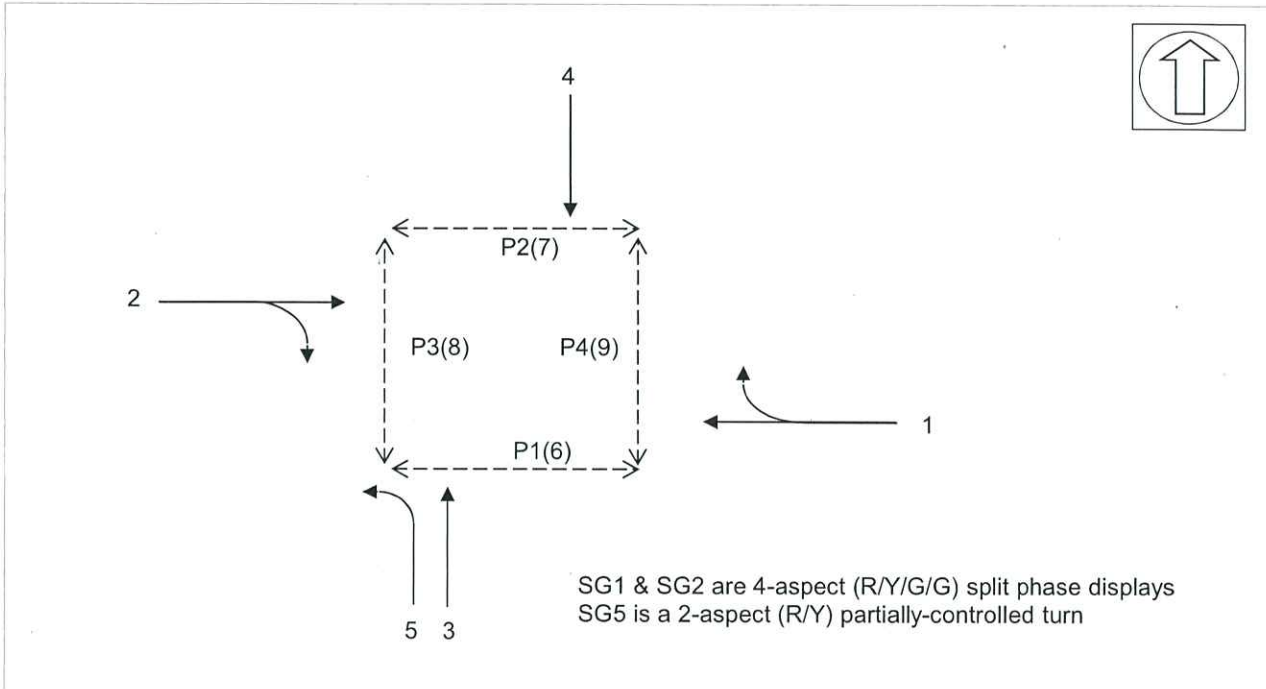
## TRAFFIC MANAGEMENT CENTRE

<input checked="" type="checkbox"/>	Checksum update only
<input type="checkbox"/>	Changes to trim or manual intervention features required
<input checked="" type="checkbox"/>	Please notify NATHAN CORCORAN (x1210) on job completion.

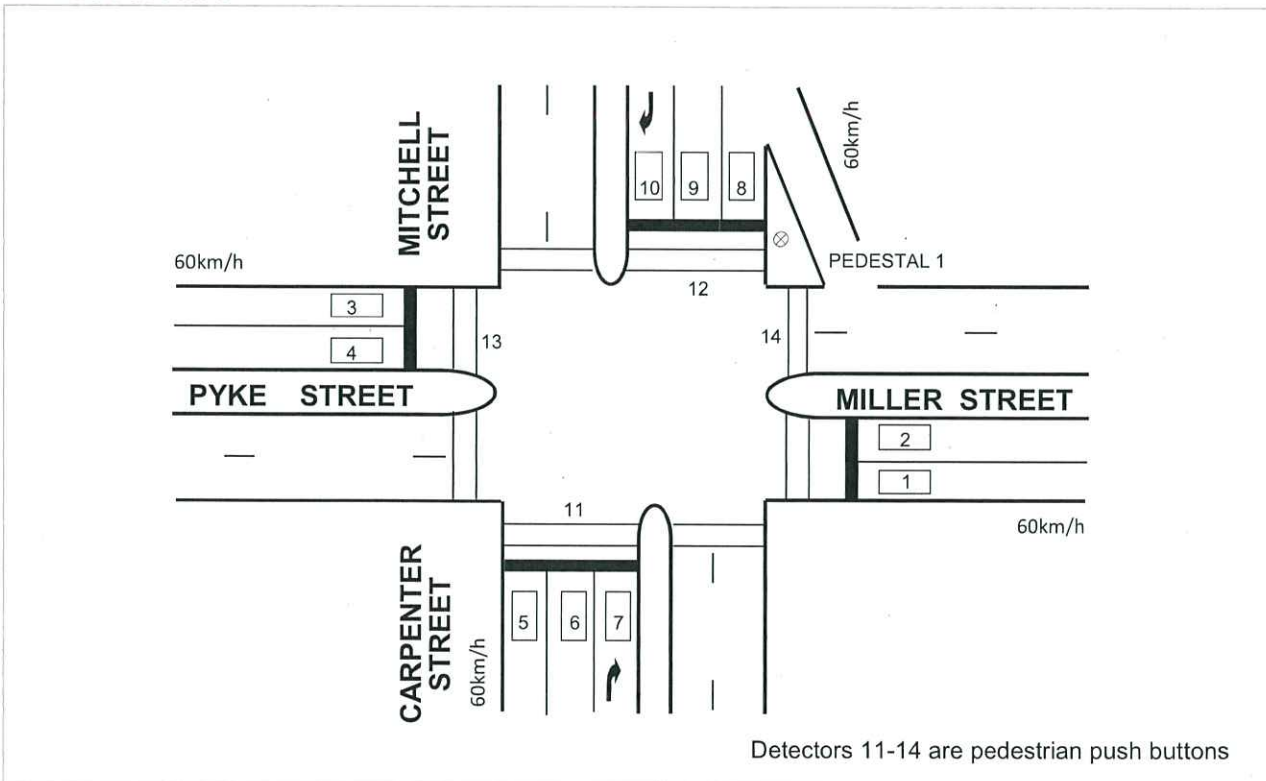
## DATE PROM INSTALLED

SITE NAME	<b>MITCHELL ST/MILLER ST/PYKE ST/CARPENTER ST</b>			SITE NO.	<b>6274</b>
MUNICIPALITY	GREATER BENDIGO	DESIGNED BY	NATHAN CORCORAN	DATE	24/06/20
PLAN NO.	781510	DESIGN CHECKED	<i>M. Bel</i>	DATE	15/7/20
CONTROLLER TYPE	Eclipse	PROM CHECKED	<i>[Signature]</i>	DATE	20/7/20

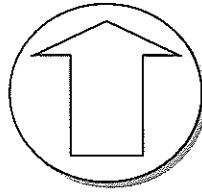
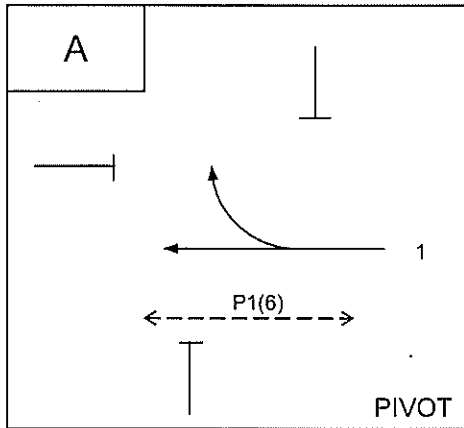
## GROUP ALLOCATION



## DETECTOR MAP

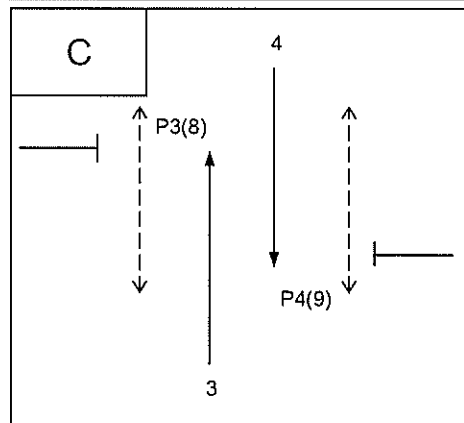
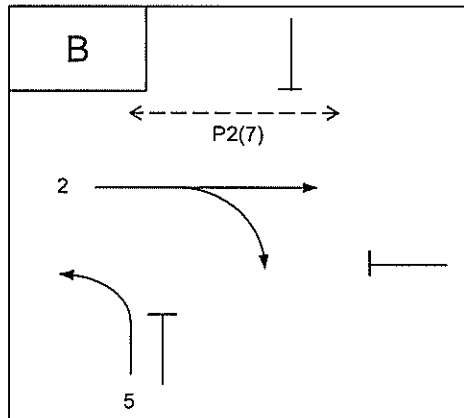


# PHASING DIAGRAM



Refer General Notes

PHASE	PROHIBITED PHASE CHANGES TO	REVERSION ON MAXIMUM	MAXIMUM V.I.G ON REVERSION



REVn. & V.A. SEQUENCE ABC

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SITE NAME

MITCHELL ST/MILLER ST/PYKE ST/CARPENTER ST

SITE NO.

6274

## DETECTOR FUNCTIONS

DETECTOR No.	Internal / External	Input Number	CALL PHASE	LOCKING CALL	NON-LOCKING CALL	SET VIG ON PHASE	EXTEND PHASE	SPECIAL FUNCTION			DETECTOR ALARMS					
								Detector Type	Description	Refer Special Notes	DA Category	Disable	DA on S/C only	Fault Simulation		
														Call & Extend	Call Only	Ignore Alarm
1	I	1	A	✓			A				0			✓		
2	I	2	A	✓			A				0			✓		
3	I	3	B	✓			B				0			✓		
4	I	4	B	✓			B				0			✓		
5	I	5	C	✓			C				0			✓		
6	I	6	C	✓			C				0			✓		
7	I	7	C	✓			C				0			✓		
8	I	8	C	✓			C				0			✓		
9	I	9	C	✓			C				0			✓		
10	I	10	C	✓			C				0			✓		
11	E	1	A		✓			P1		✓	6		✓			
12	E	2	B		✓			P2		✓	6		✓			
13	E	3	C		✓			P3		✓	6		✓			
14	E	4	C		✓			P4		✓	6		✓			
15																
16																
17																
18																
19																
20																
21																
22																
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25																
26																
27																
28																
29																
30																
31																
32																

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SITE NAME MITCHELL ST/MILLER ST/PYKE ST/CARPENTER ST

SITE NO. 6274

## APPROACH DEFINITIONS

## PHASE APPROACHES

Approach No	EXTENDING DETECTORS	APPROACH TIMER AND TIMESETTING DEFINITION*	SIGNAL GROUP	APPROACH EXPIRY (EXPAP)	Refer Special Notes
1	1, 2	A11	1		
2	3, 4	B11	2		
3	5, 6	C11	3		
4	8, 9	C22	4		
5	7	C33	3		
6	10	C44	4		
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

\* There are 8 approach timers and 4 approach timesettings available per phase:

- Where there are 4 or fewer approaches per phase, allocate one timesetting to each timer.

For example: A11, A22, A33, B11, C11.

- Where there are more than 4 approaches per phase, two or more timers must have the same timesetting.

For example: A11, A21, A32, A43, A54, B11.

## SPECIAL APPROACHES

Approach No	EXTENDING DETECTORS	APPROACH TIMESETTING	SIGNAL GROUP	DESCRIPTION	Refer Special Notes
1					
2					
3					
4					

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## GENERAL NOTES

### **SUMMARY OF XSF FLAGS**

(Communications Operation of XSF flags is required)

XSF1 - Allows the late introduction of P1 in AØ (Master).

### **GENERAL OPERATION**

REVn. - first scan after start-up demands BØ and CØ.

Use BØ special all red for BØ red if going BØ → CØ.

### **PEDESTRIAN GROUP OPERATION**

#### **Pedestrian 1**

P1 calls AØ.

P1 can introduce at the start of AØ.

In Master, P1 can introduce at anytime in AØ while XSF1 is set.

#### **Pedestrian 2**

P1 calls BØ.

P2 can introduce at the start of BØ.

#### **Pedestrian 3**

P3 calls CØ.

P3 can introduce at the start of CØ.

#### **Pedestrian 1**

P4 calls CØ.

P4 can introduce at the start of CØ.

### **DETECTOR OPERATION**

#### **General**

Clear vehicle demands during the associated phase green and yellow.

SITE NAME **MITCHELL ST/MILLER ST/PYKE ST/CARPENTER ST**SITE NO. **6274****DESIGN OF INTERGREEN AND PEDESTRIAN TIMES****INTERGREEN TIMES**

PHASE	CLEARANCE DETAILS		LEGAL SPEED	DESIGN SPEED		INTERGREEN		
	GROUP TRANSITION	DISTANCE		YELLOW	RED	YELLOW	RED	TOTAL
A	1 → P2	29.0	60	60	45	4.0	2.5	6.5
B	2 → P1	28.0	60	60	45	4.0	2.5	6.5
C	3 → P2	33.5	60	60	60	4.0	2.0	6.0
D	→							
E	→							
F	→							
G	→							

**PHASE SPECIAL ALL REDS AND SPECIAL MOVEMENT ALL REDS**

FROM PHASE	TO PHASE	CLEARANCE DETAILS		DESIGN SPEED	ALL RED	PHASE or S.M. No*
		GROUP TRANSITION	DISTANCE			
A	C	1 → P3	36.0	60	2.5	A AR
B	C	2 → P4	33.5	60	2.0	B SAR
		→				
		→				
		→				
		→				

\* Specify where the timesetting is stored (the phase special all red or the special movement time setting number)

**PEDESTRIAN TIMES**

ELECTRICIAN TIMES		WALK			CLEARANCE			MINIMUM SOLID DON'T WALK
PED	PHASE(S)	DISTANCE (m)	TIME		DISTANCE (m)	TIME		
			GRAPH	ADOPTED		GRAPH	CL1	
1	A	16.0	15	15	13.0	9	9.0	6.5
2	B	13.5	13	13	10.5	7	7.0	6.5
3	C	15.0	15	15	12.0	8	8.0	6.0
4	C	10.0	10	10	7.0	5	5.0	6.0

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## CONTROLLER TIMESETTINGS - 1

## PHASE TIMESETTINGS

Front Panel Command: Phase No.Timesetting No (e.g. 3.2 accesses C phase late start)

DESCRIPTION	Timesetting No	PHASE						
		A (1)	B (2)	C (3)	D (4)	E (5)	F (6)	G (7)
RED / YELLOW	1	-	-	-	-	-	-	-
LATE START	2							
MINIMUM GREEN	3	10	8	8				
INCREMENT	4							
MAXIMUM INITIAL GREEN*	5							
MAXIMUM EXTENSION GREEN	6	20	20	20				
EARLY CUT OFF	7							
YELLOW	8	4.0	4.0	4.0				
ALL RED	9	2.5	2.5	2.0				
SPECIAL ALL RED	10		2.0					
GAP 1	11	2.5	2.5	2.5				
GAP 2	12			2.5				
GAP 3	13			2.5				
GAP 4	14			2.5				
HEADWAY 1	15	0.6	0.6	0.6				
HEADWAY 2	16			0.6				
HEADWAY 3	17			1.2				
HEADWAY 4	18			1.2				
WASTE 1	19	7	7	7				
WASTE 2	20			7				
WASTE 3	21			7				
WASTE 4	22			7				

\* Maximum Initial Green = Minimum Green + V.I.G.

## PEDESTRIAN TIMESETTINGS

Front Panel Command: Pedestrian No.Timesetting No (e.g. 18.2 accesses P2 walk)

DESCRIPTION	Timesetting No	PEDESTRIAN							
		P1 (17)	P2 (18)	P3 (19)	P4 (20)	P5 (21)	P6 (22)	P7 (23)	P8 (24)
DELAY	1	-	-	-	-	-	-	-	-
WALK*	2	15.0	13.0	15.0	10.0				
CLEARANCE 1	3	9.0	7.0	8.0	5.0				
CLEARANCE 2	4								

\* Minimum walk time - used in Isolated and Flexilink operation

For walk times in Masterlink operation, refer to slot data.



SITE NAME **MITCHELL ST/MILLER ST/PYKE ST/CARPENTER ST**SITE NO. **6274****CONTROLLER TIMESETTINGS - 2****SPECIAL MOVEMENT TIMESETTINGS**

Front Panel Command: B.Timesetting No (e.g. B.5 accesses Special Movement Timesetting No 5)

Timesetting No	Timesetting (Range: 0-5)	FUNCTION
1		
2		
3		
4		
5		
6		
7		
8		

**SPECIAL PURPOSE TIMESETTINGS**

Front Panel Command: B.Timesetting No (e.g. B.19 accesses Special Movement Timesetting No 19)

Timesetting No	Timesetting (Range: 0-200)	FUNCTION
9		
10		
11		
12		
13		
14		
15		
16		
17		
18	0	LIMIT GREEN WATCHDOG TIMER
19	0	SPECIAL FACILITY CONTROLS ALARM TIMER
20	10	ALL RED START UP INTERVAL
21		
22		
23		
24		
25		
26		
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36		
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39		
40		

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SITE NAME **MITCHELL ST/MILLER ST/PYKE ST/CARPENTER ST**SITE NO. **6274****CONTROLLER TIMESETTINGS - 3****PRESENCE TIMESETTINGS**

Front Panel Command: D.Detector No (e.g. D.7 accesses presence time for detector 7)

DETECTOR No	TIMESETTING (Range: 0-10)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
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19	
20	
21	
22	
23	
24	

NOTE: Set presence time to zero if the detector is not a presence detector

**DAILY EVENT TIMESETTINGS**

FUNCTION	TIMESETTING
Daily start time (Hours)	
Daily start time (Minutes)	
Daily finish time (Hours)	
Daily finish time (Minutes)	

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SITE NAME **MITCHELL ST/MILLER ST/PYKE ST/CARPENTER ST**SITE NO. **6274****FLEXILINK OPERATION****PHASE SEQUENCES**

No	PHASE SEQUENCE
1 (No Y+)	ABC
2 (Y+)	

**NOTES:**

1. All phases must be specified in the phase sequence
2. Only specify phase sequence 2 if it is different from phase sequence 1.

**LOOK AHEADS & RELEASES**

PHASE SEQUENCE 1		
PHASE	LOOK AHEAD*	RELEASE
A	No	R-
B	No	R+
C	Yes (to A)	Q-
D		
E		
F		
G		

PHASE SEQUENCE 2		
PHASE	LOOK AHEAD*	RELEASE
A		
B		
C		
D		
E		
F		
G		

\* Specify the phases to which look ahead is permitted, e.g. Yes (to E, F, G, A)

**INHIBIT PHASES**

The following phases can be inhibited in flexilink by setting the call pulse one step before the call pulse of the next phase in sequence

**PULSE STEP LENGTH**

☐ One Second ☒ Two Second

**MASTERLINK & FLEXILINK SPECIAL FLAGS**

FLAG	FUNCTION
Y- Flexi	The site will operate in flexilink mode if the signal is continuously sent (C) or is used as an offset (e.g. 25)
Y- Master	
Y+ Flexi	
Z- Flexi	
Z- Master	
Z+ Flexi	
Z+ Master	
R- Flexi	AØ RELEASE PULSE
R+ Flexi	BØ RELEASE PULSE
Q- Flexi	CØ RELEASE PULSE
Q+ Flexi	

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## SCATS INTERSECTION DATA

The data shown on this page is typical data that can be used for testing controller operations.  
This data is not necessarily applicable when the site is switched on in the field.

## TYPICAL SLOT DATA

SLOT <i>n</i>	=	3	,	1	,	4
(phases) (split plans) (walks)						
INT	=	6274				
VC	=	5				
CS	=					
COM	=	NET				
PK	=	!				
S#	=					
LM	=					
RMN	=	0				
DCL	=	0				
AT	=	7				
BT	=	7				
CT	=	6				
DT	=					
ET	=					
FT	=					
GT	=					
W1	=	0	W1 T	=	16	
W2	=	13	W2 T	=	14	
W3	=	15	W3 T	=	14	
W4	=	10	W4 T	=	11	
W5	=		W5 T	=		
W6	=		W6 T	=		
W7	=		W7 T	=		
W8	=		W8 T	=		
PP1	=	0,0A				
PP2	=	0,0A				
PP3	=	0,0A				
PP4	=	0,0A				

## TYPICAL SPLIT PLAN DATA

PHASE SEQUENCE 1		PHASE SEQUENCE 2		PHASE SEQUENCE 3	
A	= 0PDB	A	=	A	=
B	= 30C	B	=	B	=
C	= 35A	C	=	C	=

## TYPICAL VARIATION PARAMETERS

VP1	=	VP22	=	VP43	=
VP2	=	VP23	=	VP44	=
VP3	=	VP24	=	VP45	=
VP4	=	VP25	=	VP46	=
VP5	=	VP26	=	VP47	=
VP6	=	VP27	=	VP48	=
VP7	=	VP28	=	VP49	=
VP8	=	VP29	=	VP50	=
VP9	=	VP30	=	VP51	=
VP10	=	VP31	=	VP52	=
VP11	=	VP32	=	VP53	=
VP12	=	VP33	=	VP54	=
VP13	=	VP34	=	VP55	=
VP14	=	VP35	=	VP56	=
VP15	=	VP36	=	VP57	=
VP16	=	VP37	=	VP58	=
VP17	=	VP38	=	VP59	=
VP18	=	VP39	=	VP60	=
VP19	=	VP40	=	VP61	=
VP20	=	VP41	=	VP62	=
VP21	=	VP42	=		

SITE NAME MITCHELL ST/MILLER ST/PYKE ST/CARPENTER ST

SITE NO.

6274

## GROUP CONFLICT TABLE

PED NO	PED NO				m				P1	P2	P3	P4												
	GROUP NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	1		X	X	X	X		X	X	X														
	2	X		X	X		X		X	X														
	3	X	X				X	X																
	4	X	X				X	X																
m	5	X					X		X															
P1	6		X	X	X	X																		
P2	7	X		X	X																			
P3	8	X	X			X																		
P4	9	X	X																					
	10																							
	11																							
	12																							
	13																							
	14																							
	15																							
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	21																							
	22																							
	23																							
	24																							

CHECKED: Necati Uyar

DATE: 24/06/20

DESIGNED BY: NATHAN CORCORAN

DATE 24/06/20